



# The Grand

FIND YOUR **PARK**



# Portage Guide

## Lake Superior: One of the Oldest Copper Tool Industries in the World

*Chief of Resources Management Bill Clayton*

Welcome to Grand Portage National Monument. I hope your visit with us is an enlightening and unforgettable North Shore learning experience.

I have a story to tell about a time in the distant past when things were different along the North Shore. Very different. I want to tell you of a time when people lived in a world that those of us in modern times with our SUVs, GPS technology, smart phones, computers, grocery stores, and sedentary living would find hard to fathom. In particular I want to tell you about a period around 5,000 years ago when the lake level was a lot higher in the Lake Superior basin, people lived without stationary houses, had to paddle or walk to get anywhere, and had cultural knowledge about ecosystems in this region that would leave a modern biologist envious. This is a period of time when ancestors of Native Americans and First Nations people began to develop a tool technology based on



NPS volunteer and archaeology technician screening excavated soil to find small artifacts missed during excavation.

native sources of copper found on Isle Royale National Park and the Keweenaw Peninsula in Upper Michigan, to supplement their existing tools made of stone, bone and wood.

This period was dubbed by archaeologists as the "Archaic" period of eastern North America (dated to about 7,000 to 2,000 years ago up here in the western and northern Lake Superior region), in that long time span before the invasion of Europeans in the 16<sup>th</sup> and 17<sup>th</sup> centuries. It was a time when small, family-oriented groups made their living by hunting game, fishing, and gathering many kinds of plants, berries and nuts. And

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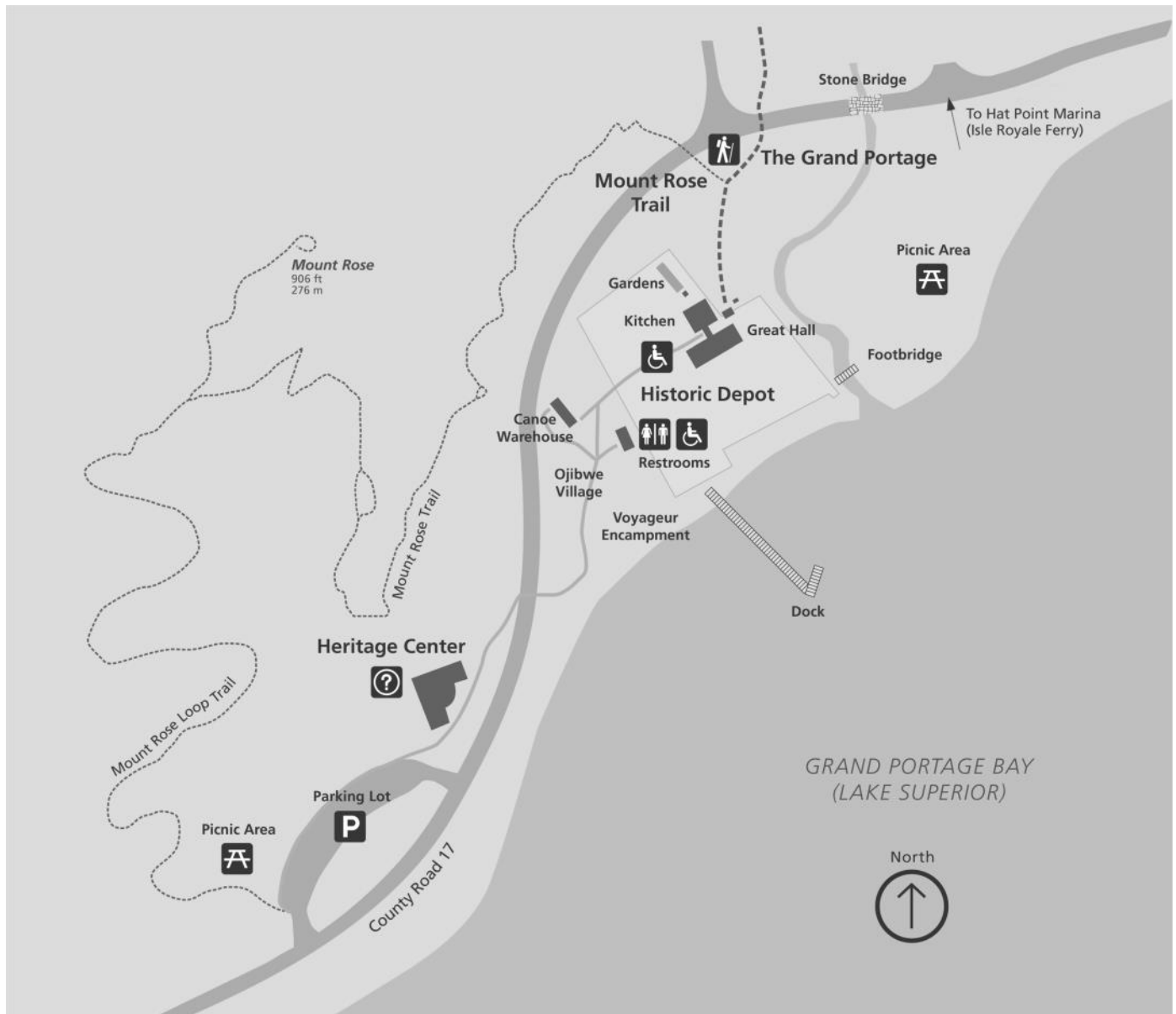
# *Boozhoo* Bonjour Welcome

Welcome to Grand Portage. We are pleased you are here and exploring “Portage” with us. There is much to see and do. Please join our interpreters and participate in the past. Please ask us about the fur trade and its ingenious technology, or its novel customs. Or come and learn about the intrinsic links between the fur traders and the nearby residents, the Grand Portage Ojibwe.

*The Staff of Grand Portage National Monument*

## A GUIDE TO HELP YOU FIND YOUR WAY AT GRAND PORTAGE NATIONAL MONUMENT

More than 200 years ago, the North West Company concentrated its business activities in and around the stockade. Four of the most important structures have been reconstructed on their original foundations: The Great Hall, kitchen, warehouse, and gatehouse. National Park Service employees and Volunteers-In-Parks (VIPs) staff these buildings. You will find rangers and VIPs wearing dress appropriate to the period, or in the NPS uniform.



## ACTIVITIES & RANGER-CONDUCTED PROGRAMS

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### LIVING HISTORY DEMONSTRATIONS

Come to the Voyageur Encampment and Ojibwe Village, where you will see demonstrations of Ojibwe and voyageur life in the late 1700s. While there, see our American Indian Three Sisters garden, and view a North West Company trade gun.

Visit the Great Hall, historically furnished circa 1790s. Also in the Great Hall, there is a Try-It-On historic clothing exhibit where *you* can fit into history!

Follow your nose to the kitchen, where you can see period cooking and baking demonstrations from mid-June through early September. Don't miss our historic heirloom garden and outdoor bake oven located just behind the kitchen.



Staff and reenactors prepare for the flint and steel fire starting contest during Rendezvous Days and Pow Wow.



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### RANGER-CONDUCTED INTERPRETIVE PROGRAMS

History comes alive when you take part in an interpretive program here at Grand Portage. Park rangers will transport you back in time, where you can become part of the story that unfolds before you!

These programs range in length from 20 minutes to 60 minutes. Be sure and check the "Program" sign in the Heritage Center or ask information desk staff for program topics, locations, and starting times. Please note: Our program schedule is subject to change without notice due to staffing or weather conditions.

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### VIDEO PRESENTATIONS

Video programs are offered regularly in the Heritage Center classroom. There are several to choose from. *Schedule subject to change.*

"Rendezvous With History: A Grand Portage Story" – Running time is 23 minutes. - *Shown on the hour.*

Short Subjects: "Our Home: The Grand Portage Ojibwe," "The Men of the North West Company," "The Gift of the Birch Bark Canoe," "A Gap in the Hills: Geography of Grand Portage" - Running time 24 minutes - *Shown on the half hour.*

## SELF-GUIDED ACTIVITIES

### HIKING TRAILS

**The Grand Portage:** The 8.5-mile *Grand Portage* is open for hiking. Two campsites are available for camping at Fort Charlotte. A free permit is required, and can be obtained at the Heritage Center or online at: [www.nps.gov/grpo/planyourvisit/permitsandreservations.htm](http://www.nps.gov/grpo/planyourvisit/permitsandreservations.htm). For more information about camping at Fort Charlotte please see page 12.

**Mt. Rose Trail:** The Mt. Rose trail, located across from the historic depot, is a paved ½-mile-long nature trail which climbs 300 feet for a spectacular vista of the depot and Lake Superior. Approximate hiking time is 1 hour. A self-guiding trail brochure is available at the trail head. The new Mount Rose Loop Trail (see map page 2) begins at the west end of the parking lot in the picnic area.

### BROCHURES AVAILABLE

We offer several brochures for your use and enjoyment:

- NPS Grand Portage Official Map and Guide
- Ojibwe Lifeways
- Historic Gardens
- Bird & Wildlife Checklists
- Grand Portage Rocks

## JUNIOR RANGER PROGRAM

Become a Grand Portage Junior Ranger! This program, for kids ages 7 to 13, is free. Activity guides can be picked up at the Heritage Center and Great Hall. You should allow at least 1½ hours to complete this activity. When finished, kids are awarded a Junior Ranger badge and a voyageur's contract. This is a family activity and we encourage parents to get involved and enjoy the program with their kids! Children under the age of 7, or those with special needs, will require the assistance of an adult.

## BOOKS WORTH BROWSING

To help alleviate the isolation of winter posts, the North West Company provided reading materials. Daniel Harmon, a North West Company clerk wrote,

*"Most of our leisure moments (and which is nearly nine tenths of our time) will be spent reading, and conversing on what we have read."*



The following titles may be found in *your* local library:

- "Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teaching of Plants" by Robin Kimmerer, 2015. Milkweed Editions, Minneapolis, MN, 408 pg.
- "Once They Were Hats: In Search of the Mighty Beaver" by Frances Backhouse, 2015. ECW Press, Toronto, ON, 256 pg.
- "A Bag Worth A Pony: The Art of the Ojibwe Bandolier Bag" by Marcia Anderson, 2017. Minnesota Historical Society Press, St. Paul, MN, 272 pg.
- "Original Local: Indigenous Foods, Stories, and Recipes from the Upper Midwest" by Heid Erdrich, 2013. The Minnesota Historical Society Press, St. Paul, MN, 264 pg.
- "Holding Our World Together: Ojibwe Women and the Survival of Community" by Brenda Child, 2013. Penguin Books, New York, NY, 240 pg.
- "North Shore: A Natural History of Minnesota's Superior Coast" by Chel Anderson & Adelheid Fischer, 2015. University of Minnesota Press, Minneapolis, MN, 632 pg.
- "The Writings of David Thompson, Volume II" edited by William E. Moreau, 2015. McGill-Queen's University Press, Montreal, Quebec, 310 pg.
- "Songs Up on the Rivers: The Buried History of the French-Speaking Canadiens and Métis from the Great Lakes and the Mississippi Across to the Pacific" by M. Bouchard, R. Foxcurran, S. Malette 2016. Baraka Books, Montreal, QC, 448 pg.
- "The Fur Trade Gamble: NWCo on the Pacific Slope" by Lloyd Keith, John Jackson 2016. University of Nebraska Press, Lincoln, NE, 300 pg.
- "The Beginner's Guide to Growing Heirloom Vegetables: The 100 Easiest-to-Grow, Tastiest Vegetables for your Garden" by Marie Lannotti, 2012. Timber Press, Portland, OR, 252 pg.
- "Modern Spirit: The Art of George Morrison" by W. Jackson Rushing III & Kristen Makhholm, 2013. University of Oklahoma Press, Norman, OK, 182 pg.

These books are also available at the Eastern National bookstore in the Grand Portage National Monument Heritage Center.

# The Grand Rendezvous

*Ranger Karl Koster*

The hustle and bustle of summer activity peaked with the North West Company Rendezvous held here at Grand Portage. This was the time when furs from wintering posts, which reached into Canada, were delivered down the historic *Grand Portage*. The annual Rendezvous is still celebrated here during the second full weekend of August. The event is held in conjunction with the Rendezvous Days and Powwow, sponsored by the Grand Portage Band of

Lake Superior Chippewa. The annual gathering is our biggest and grandest celebration of the year, a time when Grand Portage comes alive and reflects on its rich heritage. Re-enactors from across the country and Canada gather to camp and challenge each other. This is one event you do not want to miss! Music, dancing, craft demonstrations, and hands-on workshops ensure an exciting weekend at the national monument.



## Hats Off to Hat Makers

*Ranger Karl Koster*

The North West Company shipped fur pelts originating from over 100 of its trading posts in the Northwest directly through Grand Portage. In the 1700s and early 1800s fur pelts were used in fashionable clothing, felt hats, soft pillows, toothbrushes, and more. The felt hat industry was the largest consumer of the coveted North American furs. Furs for the hat trade made up more than 65% of all English fur imports during this time. Beaver pelts accounted for over 60% of the total pelts traded in one season during the heyday of the North West Company (1785-1802). The use of beaver pelts for hats severely depleted the beaver population in Eu-

rope and Russia and eventually North America, as well.

Historically, hatters used a variety of furs in the hat making process; each had specific advantages and disadvantages. Beaver was considered "*par excellence*," meaning it was the best for creating the most durable and highest quality hats. Other furs commonly used in felt hat making were rabbit, hare, muskrat, and otter. Felt hats could even be made from the exotic fur of camels, cats, and monkeys! Additionally, sheep's wool was a common felting material for

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2016 NPS archaeology field crew at Isle Royale National Park

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Ancient copper hook found in NE Minnesota.

doing it all by the seasons, moving strategically from resource to resource across various landscapes and ecosystems throughout the region, trading and interacting with other groups along the way.

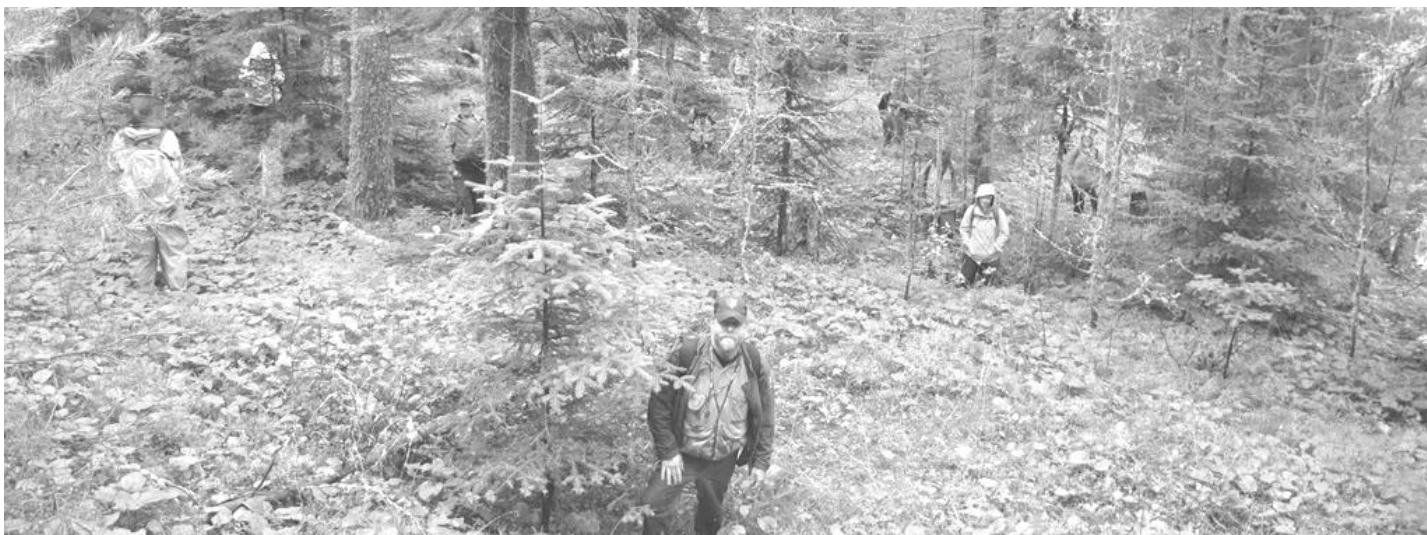
One of those resources involved locating places on the landscape where the geology provided certain kinds of rocks and raw copper to make the tools needed to get the hunting and gathering done. Stone tools go way back in human history; a recent article in the preeminent science journal *Nature* reports a recent archaeological discovery at a site in Kenya (known as *Lomeweki 3*) where the stone tools date to around 3.3 million years ago – designed and made by a species of primates that preceded early humans. That would make it hands down the oldest and most long-lived of all our technological traditions, probably in concert with bone and wood. In other words during the vast time depth of human and pre-human history, stone was one of the major “go-to” resources for making the tools that got us through all

those centuries. That is, until someone figured out how to find, extract and process copper ore to supplement the stone, bone and wood tools.

One of the most profound discoveries in archaeological research is the cultural phenomena known as “independent invention” or “multiple discovery.” This is an important concept where we find that certain technological ideas have been invented separately by cultures throughout history. Major events in human history and cultural evolution, such as the rise of agriculture, the invention of clay pottery, the construction of pyramid-type buildings or even the concept of monumental architecture are all examples of independent technological invention by cultures isolated from each other by time, long distances and geographical barriers that were too formidable to travel. The adoption of copper as a raw material for making day-to-day tools and weapons is another striking example.

There’s various moments in time in specific regions of the world when prehistoric people *independently* made the choice to begin using copper ore to supplement traditional tool kits. In some cases as in Europe and the Middle East this copper-using period dubbed by archaeologists as the “Chalcolithic” period (after the Greek words *khalkos* meaning copper and *lithos* meaning stone) occurred around 6,000 – 7,000 years ago. For these regions, copper use was a precursor to the invention of bronze, a strong metal alloy made by mixing copper with tin. In other parts of the world such as the ancient city-states of Mexico, South American and Central America, copper working came thousands of years later.

One of the earliest copper tool traditions in the world actually developed here in the Western Great Lakes by



Evidence of ancient copper mining on Isle Royale. Each crew member is standing in a quarry pit.

indigenous groups almost 7,000 years ago. The two oldest copper sites in North America come from our own Lake Superior basin. The oldest is from a site on the South Shore on the Keweenaw Peninsula north of Houghton, Michigan. This site was roughly dated to about 7,800 years ago. A more precise date of 6,800 years ago was recovered based on radiocarbon dating a piece of the original wooden shaft of cone-shaped copper spear or dart point. This point was found at a site on South Fowl Lake, just outside the eastern border of the Boundary Waters Canoe Area Wilderness along the current international border.



One of the oldest copper tools ever found.

The process of making tools from raw copper ore was not a simple one. It is assumed that prehistoric groups must have had some level of awareness of patterns found in geologic landscape, at least as it played out on the surface. We know this from the numerous copper quarry sites that have been found on Isle Royale and the Keweenaw Peninsula. There was an understanding that copper ore could be located in veins exposed on the surface or buried under soil and sediment. Copper ore

could also be found in bedded rock and as loose cobbles in that glacial sediment known as “till.” In all cases an intimate and thorough knowledge of the landscape made copper extraction possible. These people certainly knew their world in detail.

So far it appears that in North America copper tools were made by cold hammering raw copper and/or softening it by heating it up in order to be able to work it more efficiently by hammering. There is no archaeological evidence (yet) of smelting ore to high enough temperatures to produce tools by full melting and casting. Nor is there evidence of making alloys of metals, like adding tin to copper to get a stronger metal, in this case bronze. It would appear that for the needs of day-to-day hunting and gathering as well as trade with neighboring groups, hammered copper worked just fine, and did so for thousands of years. And the evidence backs that up, copper was used all the way up until the time of European contact.

There has been an enormous amount of archaeological research done on sites from this period throughout the Upper Midwest and much of the eastern U.S. We literally have data from thousands and thousands of archaeological sites with strong radiocarbon dates that show how prolific the copper industry was in North America. What we don't have, is enough data to tell the story of copper quarrying and copper tool manufacturing near the source areas on Isle Royale itself. In order to fill in this research gap the archaeologist at Isle Royale NP and myself have been conducting a long-term project aimed at surveying and excavating the ancient, remnant beaches found all around the island. Using special mapping software and geological data

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Archaeology field crew on Isle Royale, 2014.

*(Continued from page 7)*



NPS archaeologist and volunteer excavating on Isle Royale.

we've been able to locate the ancient shorelines and beaches of a deeper lake that once existed in the Lake Superior basin. This lake known as Lake Nipissing (around 5,000 years ago) was about 35 feet higher than our current Lake Superior. Based on radiocarbon dates from copper-bearing archaeological sites all over the Upper Midwest, the Nipissing period corresponds closely to the heyday of Isle Royale copper quarrying and copper tool manufacturing. A cultural period also known by archaeologists as "Old Copper Culture."

What we are attempting to do is to find out as much as

we can about what life was like for the copper seekers visiting or living on Isle Royale 5,000 or so years ago. We're asking questions of the data we're finding like, how did the "work flow" of copper manufacturing actually happen? Was it a highly organized and scheduled set of activities? Was there a lot of variation in mining and tool manufacture processes? How did the manufacturing process actually take place? What kinds of tools were needed? What other activities were going on while groups were at the island working copper? Were there other reasons to go there? What kinds of food were they focusing on? Any hunting taking place? It may seem obvious because it's an island but just how much fishing was going on during that time? Sometimes big surprises show up in archaeological data. How long did they stay on a copper gathering foray? What kind of stone tool technology were they using during their stay on the island?

Archaeology is a form of history that seeks to create stories about where, how and why people lived during



Ancient copper knife found on a protected archaeology site in NE Minnesota.

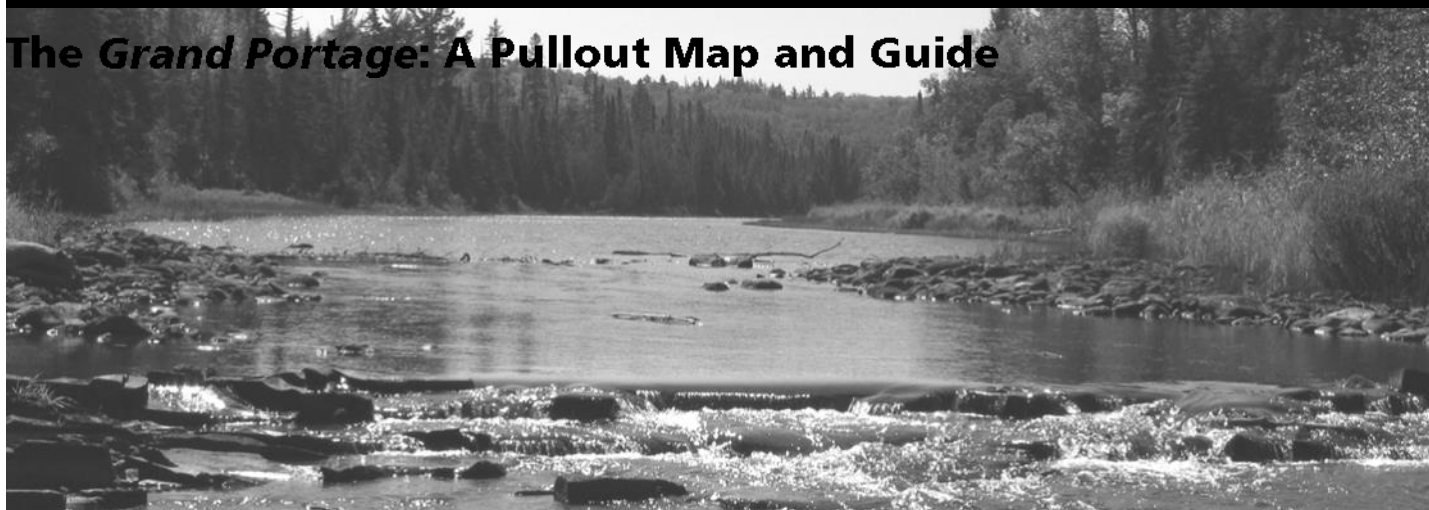
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# Grand Portage

National Park Service  
U.S. Department of the Interior



## The Grand Portage: A Pullout Map and Guide



### History

Native people have traveled this footpath between the Pigeon River and Lake Superior for centuries. The Ojibwe called the *Portage* “*Gichi Onigaming*,” The Great Carrying Place. *Gichi Onigaming* or the *Grand Portage*, to those from Montréal in the colony of New France, enabled Ojibwe and other Indian peoples to conduct trade with neighboring tribes and to access local hunting and gathering areas. Ojibwe people frequently traveled the *Portage* carrying birch bark canoes and baskets, fish from Lake Superior, garden seed, wild rice, raw copper from Isle Royale and flint from Gunflint Lake.

In the late 17<sup>th</sup> century, as French trade with woodland peoples expanded, explorers such as Daniel Greysolon, *Sieur Du Lhut*, may have learned about the *Grand Portage* through contacts with Ojibwe, Cree or Assiniboiné families. Explorers possibly traveled across the portage with Indian guides but no written account of such use has been uncovered.

The first documented travel along the *Grand Portage* was made in 1731. Explorer and trader Pierre Gaultier, *Sieur de la Vérendrye*, sent a son and nephew across the *Portage* with instructions to establish a post on Rainy Lake. *La Vérendrye*’s account indicated that the *Portage* was well known by native people. He described it as being from three to three and a quarter

*lieues* (7.5-8.1 miles). He also noted, “*all our people, in dismay at the length of the portage. . . mutinied and loudly demanded that I should turn back.*”

After *La Vérendrye*, other explorers and traders traveled the *Grand Portage* to access the *pays d’en haut*, the vast unknown “up country,” of the northwest. By 1763, after conclusion of the French and Indian War, the British had wrested control of the fur trade from the French, and trade with Ojibwe and other woodland and plains Indians continued to expand. The North West Company, in 1784, began building its summer headquarters at the eastern terminus of the *Portage*. For the next 25 years, voyageurs, clerks, guides, interpreters, wintering partners and agents of the NWC, the fractious XY Company and smaller firms routinely used the *Grand Portage*.



The *Grand Portage* goes through a gap in the hills



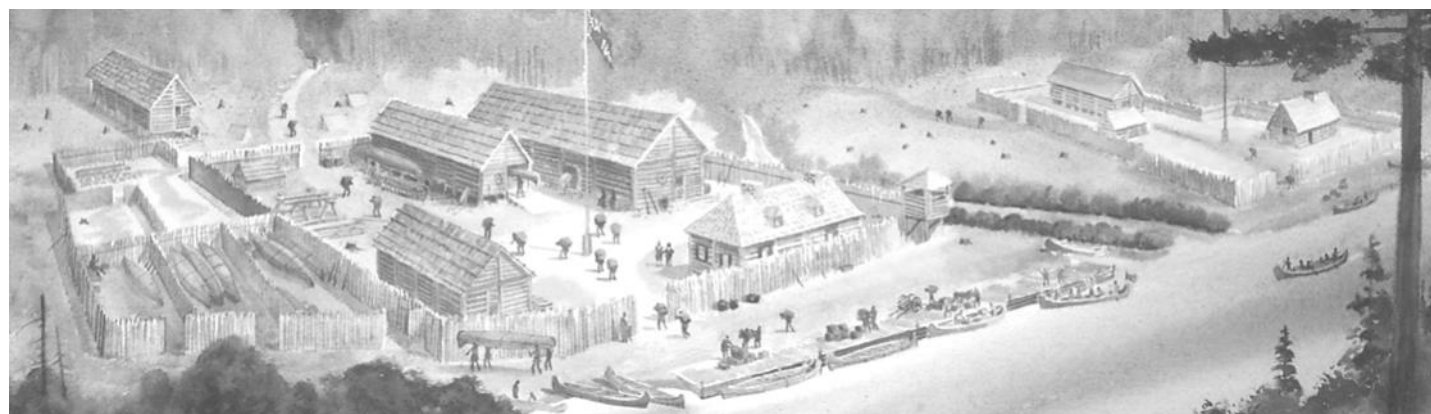
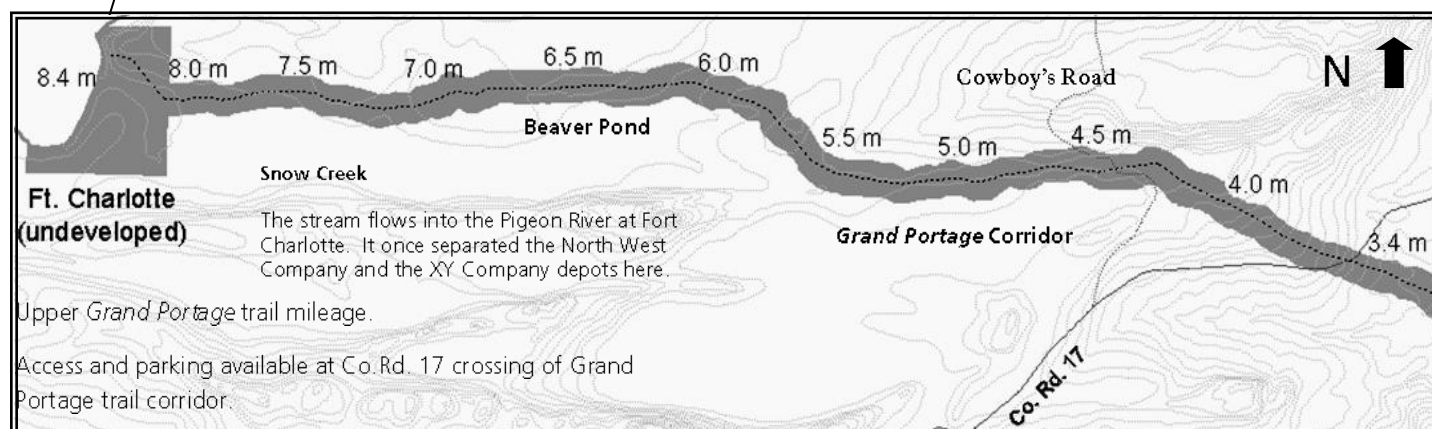
## Pigeon River

The Pigeon River is the western terminus of the *Grand Portage* and forms part of the international border between the United States and Canada. From Fort Charlotte the river flows 22 miles east over hazardous rapids, cascades and waterfalls finally emptying into Lake Superior. To avoid these obstacles, Indian people portaged their canoes across the *Grand Portage* between the river and Lake Superior long before Europeans arrived.



## Fort Charlotte

The North West Company and later the XY Company built stockade depots here. They enclosed warehouses and support buildings to temporarily store and secure trade items and furs being transported across the *Grand Portage*. Fort Charlotte was named after the wife of King George III.



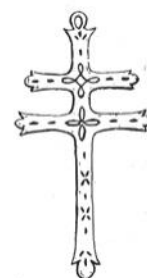
During the 1790s, Fort Charlotte was such a busy depot that winterer Mr. Donald Ross was called "the governor," due to his long tenure there.

Fort Charlotte watercolor by Howard Sivertson (View original in Heritage Center exhibits and at top of curved stairs)

## Distances

Distances along the *Grand Portage* are indicated in miles by travel in both directions on the Grand Portage is shown below.

From Fort Charlotte to Lake Superior		From Lake Superior to Fort Charlotte
0	Fort Charlotte	8.5
2.5	Beaver Pond	6.5
4.4	Co. Rd 17	3.4
7.8	MN Hwy 61	.6
8.5	Lake Superior	0



## Parking

*Portage* users may park vehicles at the Heritage Center parking lot or at the County Road 17 crossing. If your plans include camping at Fort Charlotte, please obtain your free permit at the information desk in the Heritage Center. Please inform a park ranger if you intend to leave vehicle(s) overnight in the parking lot.

## What is a Portage?

A *portage* is an overland trail or pathway which permits the transport of materials such as canoes, supplies and cargo from one body of water to another.



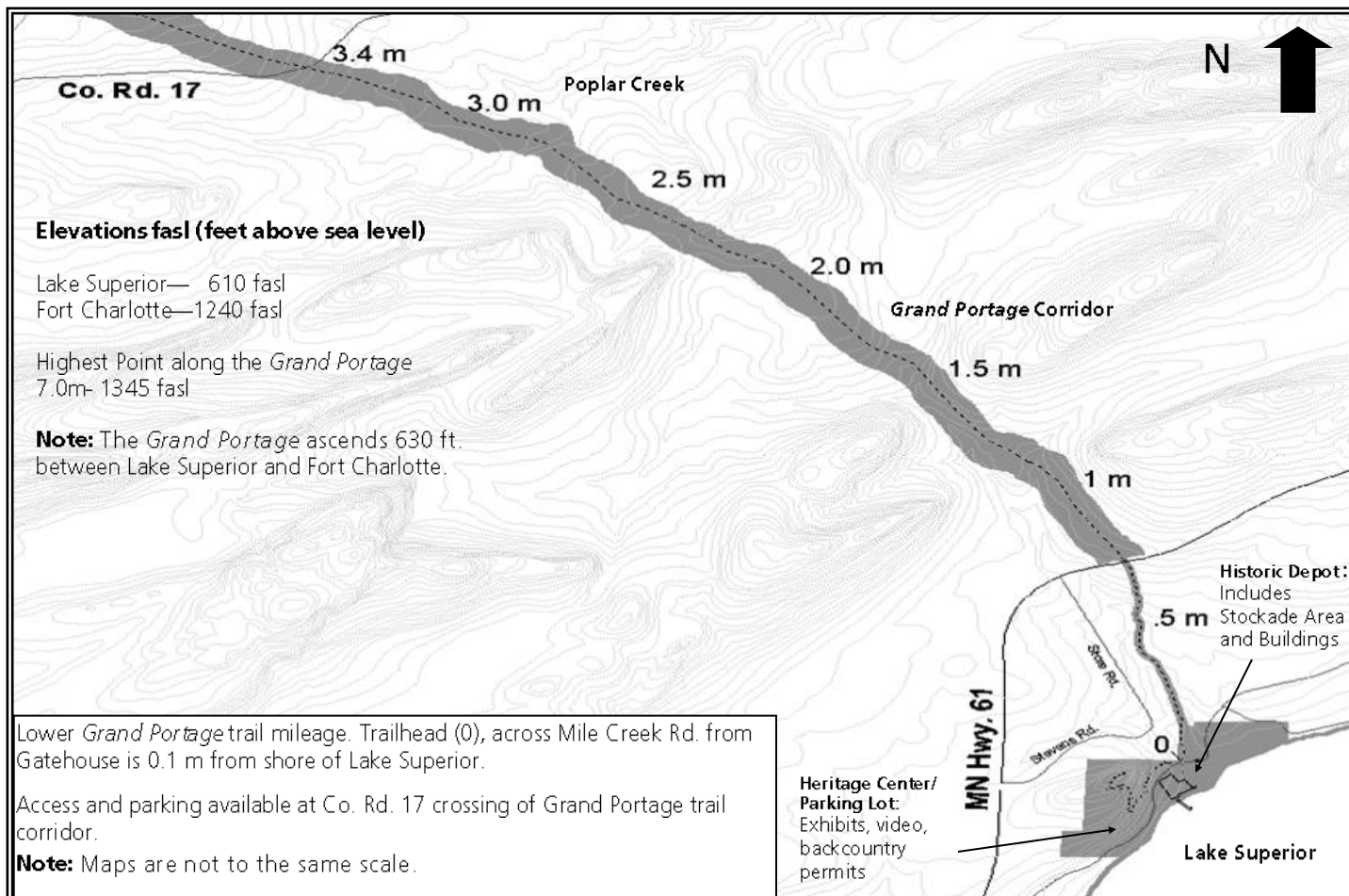
Majestic old growth eastern white pine along the Grand Portage.

## Poses

During fur trade times the *Grand Portage* was divided between 16 to 18 *poses* or resting places. Such rest stops were usually located near a difficult section of a portage such as a hill or marshy area and frequently near sources of fresh water. Here voyageurs unloaded their heavy packs, waited for their strength to return and enjoyed a drink or brief smoke of their pipe before continuing.

*Poses* also served as temporary collection points for packs of valuable merchandise. All packs and materials being carried across a portage were assembled together before moving to the next *pose*. By moving the packs in this organized way, any loss was minimized.

The length of a portage was frequently defined by the number of *poses* it contained. They were generally one-third to one-half mile apart depending on the difficulty of the terrain. The location of a *pose* probably changed over time as the conditions in that particular area changed.



## Camping/Hiking and Skiing

The *Grand Portage* is open year round for hiking, cross country skiing and snowshoeing. You may access the *Portage* from the Heritage Center parking lot overlooking Lake Superior, MN Hwy. 61, Co. Road 17 or from Fort Charlotte on the Pigeon River.

The *Grand Portage* climbs 630 feet between Lake Superior and the Pigeon River. Round-trip hiking time from the depot is approximately 10 to 12 hours.

Co. Road 17 crosses the *Grand Portage* at its approximate mid-point and is about 11.5 miles from the Heritage Center parking lot. Take MN Hwy. 61 south from Casino Road, travel about a quarter mile to the junction of Co. Road 17. Turn right on Co. Road 17 and follow it until it meets Old U.S. Hwy. 61. Co. Road 17 continues to the right, passes Mt. Maud Road on the right, and Partridge Falls Road on the left eventually crossing the well marked Grand Portage mid-point trailhead.

## Safety

The *Grand Portage* is often wet and muddy during late spring, summer and early fall. Terrain is uneven and there are exposed rock surfaces and tree roots. Boardwalks have been constructed over some of the wettest places, but large areas of standing water frequently remain throughout the year. Sturdy, waterproof footwear is recommended.

- Carry plenty of drinking water.
- Mosquitoes and black flies are abundant from late spring until mid-summer. Take repellent with you.
- Please stay on the *Portage*. Old logging roads and animal trails crisscross the *Grand Portage* and may lead you astray.
- Do not disturb wildlife or archeological remains.

## Camping at Fort Charlotte

- Two campsites at Fort Charlotte will accommodate up to 10 people.
- Reservations for a free camping permit can be made ahead of time by calling for assistance during business hours or online.
- More information is available online at: [www.nps.gov/grpo/planyourvisit/permitsandreservations.htm](http://www.nps.gov/grpo/planyourvisit/permitsandreservations.htm).
- Please inform a park ranger if you plan to leave your car in the parking lot overnight or longer.

## Leave No Trace Camping

- Carrying a backpacking stove is recommended.
- Campfires are permitted only in fire grates.
- A pit toilet is located nearby.
- There is no safe drinking water at Fort Charlotte, so water must be filtered, chemically treated or boiled before drinking.
- Please pack out what you pack in. Do not bury trash or place it in the pit toilet.
- Use only dead and downed wood for campfires.
- Do not cut down trees near the campsites or peel bark from them.



## Prohibited on the Grand Portage:

- Motorized Vehicles
- Motorcycles
- ATVs (All-terrain vehicles)
- Snowmobiles
- Bicycles
- Horses



2015 Archaeology survey crew, Isle Royale.

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the past. The trick is, unlike fictional stories which come from imagination, archaeological stories have to be grounded in evidence, and in our case the evidence comes from fragments of objects, food stuff and other natural forensic evidence left in the ground in an archaeological site. Like the remains of campfires that once burned centuries ago along an ancient shoreline. Campfire residue can contain lots of very useful forensic information to add to the story. Like what people ate at a particular site. How hot did they have to heat a piece of raw copper in order to work it into a tool?

Archaeologists study the objects and their relationships to each other within an archaeology site and among

other archaeology sites of the same period. To put it simply, archaeology IS a forensic science. Straight out of CSI or Sherlock Holmes. Similar to scientific principles of analyzing the residue left from ancient activity. And the final process of putting together the evidence to create a logical story of what happened at any specific spot on the landscape, at any time period. The next time you find yourself at Isle Royale stop and take a moment to think about the archaeological story as it played out there, 5,000 years ago when the water was higher. When people made their own tools out of copper and knew about the landscape and its biological and geological resources on a level far beyond us... in our time.

## ***Ojibwemodaa: Let's Speak Ojibwe***

*Ranger Jeremy Kingsbury*

These phrases can be seen around Grand Portage, or can be used during your visit here.

*Boozhoo:* (Boo-Zhoo): Hello (slightly formal)

*Aaniin:* (Ah-Neen): Hi

*Mii Gwech:* (Me-Gway-ch): Thank you

*Biindigen:* (Been-dig-ain): Come inside

*Awegonen?:* (Away-gon-in): What is it?

*Aaniindi?:* (Ah-neen-dee): Where is it?

*Ganawaabi:* (Gah-nah-wah-bee) Look

*Ikwe:* (Ick-way): Woman

*Inini:* (in-in-ee): Man

*Abinoojiih:* (Ah-Bin-oooh-jee): Child

*Bajjishka'ogaa:* (Bah-Jeesh-ka-oh-gahn): Conical Lodge

*Wiigiwaam:* (Wee-gih-wahm): Wigwam

*Nisawa'ogaa:* (Nih-sah-wah-oh-gahn): Peaked Lodge

*Gigawaabamin Minawaa:* (Gih-gah-wah-bah-min Meen-ah-wah): See you later

many centuries. Wool felt hats were considered lower in quality than true fur felt, as they didn't keep their shape, they broke down, and they could become "stinky." Today, hats are still made from many different types of furs, and wool, but beaver still reigns as the highest quality there is.

The furs underwent a long and intricate process to be made into functional and stylish hats that became coveted fashions of the day. In some cases, furs were initially treated with chemicals to aid the felting process. Then, to begin to turn the fur pelt into a hat, the guard hairs were removed, and then the inner fur, and finally, the leftover skin was set aside.

Next, the higher quality inner fur was usually mixed with other kinds of fur, or wool. However, hatters left nothing to waste. The outer guard hairs became stuffing for pillows and upholstery, and the hides became a major component in the manufacturing of glue.

The hatter then chose the amount of fur he would need per hat by weighing it on a scale. The right amount of fur was then moved to a space in the shop referred to as a "bow garret." There, he used a hatter's bow (a tool resembling an oversized fiddler's bow) to "dance or excite" the fur to clean and separate it. The vibration of the string amongst the fur shook out debris/dust, and tossed the fur, now called "fluff," into alignment for felting. Once arranged by the bow, the "fluff" was lightly moistened and gently compressed into an over-sized hollow cone resembling a floppy hat that would cover head AND shoulders!

To tighten the fibers and shrink the over-sized

cone, it was rolled and compressed by the hatter at a battery (wooden planks surrounding a kettle of near boiling water), like a baker kneading dough. The "hatter's magic" or skill was in the sweat and toil of working the cone for hours above the boiling water until it was "just right." It was rolled and unrolled, dipped in the kettle and wrung out, over and over again. The kettle contained mostly water, but chemicals and other items which were believed to aid the process were also added. Sulfuric acid, bits of bone, scraps of leather, and even a few scoops of oatmeal are all known to have been used at some point. The process was done when the felted cone was of the correct size and thickness for a hat.

To shape the now shrunken cone into a hat, the hatter brushed, cut, compressed, and shaped the hat onto a myriad of wooden hat blocks. Each hat block was chosen precisely for size and fashionable style. After shaping, the hat was returned to a kettle for dyeing. Black was the most popular color for hats, and the dye was created with logwood chips imported from South America. A hat dyer might add oak galls (a "blister" on an oak tree caused by an insect), verdigris, or even urine to aid in darkening and holding the color. Attaining a lasting true black was difficult; for this reason dyers kept trade secrets and exclusive recipes for their colors.

Once dry, a stiffener was added to help the hat keep its shape. This process was also kept a trade secret amongst hatters. Stiffening ingredients included shellac, gum arabic, vinegar or beer dregs, egg whites, and diluted animal-based glues. Finishing included clipping errant hairs, *pouncing* or smoothing the felt with a brick of pumice, brushing the hat, sewing linings and attaching hat bands and other flourish-



### British Hat Duty Stamp

es like brightly colored feathers.

Purchasing a hat from a hat shop between 1784 and 1811 came with a financial commitment to the British government. It may seem odd today, but all hats from the lowest quality wool to the extravagant beaver felt hat came with a tax stipulated by its retail cost. Hats were stamped with a duty stamp on the liner to show the government had received its share.

The popularity of felt hats led to over harvesting, and the North American beaver population began dwindling as early as the early 1800s. Diminished supply inflated beaver pelt costs, and talented hat-makers were forced to find new fur supplies to keep costs down. Hatters turned to other furs such as the coypu, or nutria, a South American mammal with similar fur quali-

ties for making fur felt hats. They also began to use manufactured silk plush which could be woven in mills. The silk was stitched over a body of stiffened muslin or cardboard. Once brushed with a fine steel comb, the broken silk fibers looked like real fur. As silk hats became popular, they often were known as "Paris hats."

Today, we welcome you to enjoy our new exhibit in the Great Hall, entitled *The Borradaile and Atkinson Hat Shop*. *Borradaile and Atkinson* was a company operating in London during the height of the fur trade. Records indicate they supplied the North West Company with felted hats. Enter the new exhibit and see the tools and raw materials of a 1799 London hat shop. See the felting process and the dreadful story of mercury and caustic acids used in this dangerous trade.

## Can You See the Forest for the Trees?

*Resource Assistant Brandon Seitz*

Grand Portage National Monument is fortunate to have all three of the pine trees that are native to Minnesota. White pine, Jack pine and Red pine. Unfortunately, they are not as abundant as they once were, nor are they in the same places.

What is a pine tree? Well, in Minnesota it is a needle leaved coniferous tree. Conifers are a group of plants that do not flower. This group also includes White and Black spruce, Balsam fir and Northern cedar trees of Minnesota.

Instead of producing flowers that bear fruit and seeds, conifers produce cones to protect and house naked seeds. Naked? Yes, conifer seeds are naked. They are evolutionarily much older and simpler than the seeds borne of flowering plants like roses, tomatoes or blueberries.

In a White pine tree the male strobili (A) (See Figure 1), produce pollen that is transported by the wind. You may have noticed on certain days in May or June yellow pollen clouds raining down covering things like your car. On the same tree, the female strobili (B) capture that pollen in order to produce seed bearing cones (C). When the pine cone and winged seeds are mature in a couple of years (D) they may be released

from scales (E) on the cone and helicopter down to the ground in a process we call seed rain.

A Red squirrel may cut down the cone, strip the seeds and squirrel away to a winter cache any seeds they didn't already eat. In either case, if the seeds are not eaten, do not rot, and land in a place on the soil that is good and not already taken, they have an opportunity to germinate. Whether they do germinate, grow into a seedling, a sapling, and eventually into a tree is very unlikely. The odds of one seed making it in nature to be an old growth tree might be one in a million.

To improve these odds, and restore White pine seed rain to parts of the park that no longer have it, resource managers at the park are growing their own trees. Last year, the park's Arborist began gathering seed from nearby trees growing in the same environment, at the same elevation and in the same soils.

He is growing the trees and planting just enough of them together on Mt. Rose that eventually a few of them can trade pollen and begin the process of restoring White pine to its' previous abundance.

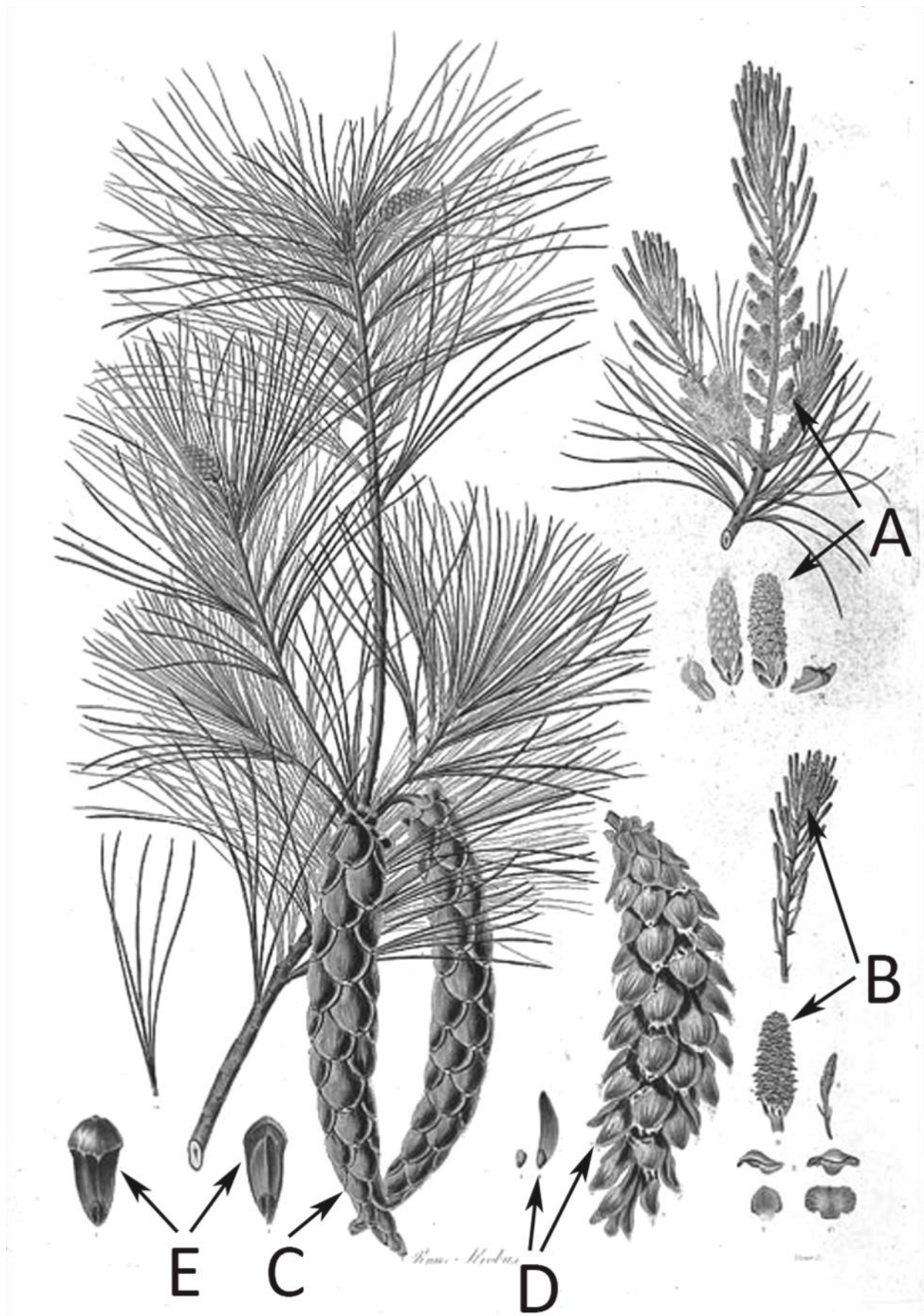


Figure 1: Hand-colored stipple engraving from *A Description of the Genus Pinus* by Aylmer Bourke Lambert (1761-1842).

# AREA INFORMATION:

**There are a few places nearby to purchase light meals, snacks, gas, and other necessities.**

The food and lodging information provided here is for the convenience of our visitors,  
and is not an endorsement by the National Park Service.

## SERVICES:

**Grand Portage Trading Post & Casino/ groceries/supplies/post office/SPIRIT Gas & Diesel** – Drive about 1/2 mile west (a right hand turn out of Heritage Center parking lot) onto Mile Creek Road. The Trading Post, Post Office and SPIRIT gas station are on the right between Mile Creek Road and Highway 61. Phone: 218-475-2282

**Grand Portage Lodge & Casino /gift shop/ delicatessen/Island View Dining Room** – Drive about 1/2 mile west on Mile Creek Road. The Grand Portage Lodge 100-room facility is on the left at the stop sign. Phone: 218-475-2401

**Ryden's Border Store/Phillips 66 Gas** – Located about 4 1/2 miles north of Grand Portage National Monument on Highway 61. At any junction to Highway 61 in Grand Portage, turn right (east) on Highway 61. Follow Highway 61 to Ryden's on your left. Phone: 218-475-2330

**Voyageurs Marina** – Located about 1½ miles from the monument. Follow Mile Creek Road east over stone bridge. Follow County Road 17 to your left, up over the hill and past the church and school. Continue to follow County Road 17 1½ miles, to the east side of the bay. The marina will be on your right. Under new management. Phone: 218-475-2476

## CAMPGROUNDS:

**Grand Portage Marina & Campground** – Marina Rd. (adjacent to Grand Portage Lodge & Casino), Grand Portage, MN, 55605. Phone: 218-475-2476

**Judge Magney State Park** – 4051 E. Hwy. 61, Grand Marais, MN, 55604. Phone: 218-387-3039

**Grand Marais RV Park & Campground** – Highway 61, Grand Marais, MN, 55604. Phone: 218-387-1712

## LOCAL STATE PARKS:

**Grand Portage State Park** – 9393 E. Hwy 61, five miles east of Grand Portage. Offers a scenic trail to the spectacular Pigeon Falls. The park has a visitor contact station and sales area. There are no camping facilities. Phone: 218-475-2360

**Judge C.R. Magney State Park** – 4051 E. Hwy. 61, 14 miles west of Grand Portage. Offers trout fishing and white-water kayaking on the Brule River. There are six miles of summer hiking trails and five miles of winter ski trails. A well-maintained trail winds along the river to the Upper and Lower Falls and the Devil's Kettle, a large pothole into which half of the river disappears. Phone: 218-387-3039

**Cascade River State Park** – 3481 W. Hwy. 61, 45 miles west of Grand Portage. Offers spectacular waterfalls along the Cascade River. There are also scenic overlooks of Lake Superior. There are 18 miles of trails through a birch and spruce forest. The park has a 40-site campground, picnic facilities, and plenty of lake and river fishing. Phone: 218-387-3053

## ***Need Special Assistance?***





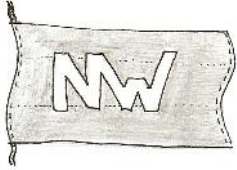

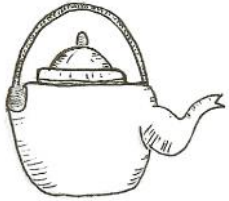





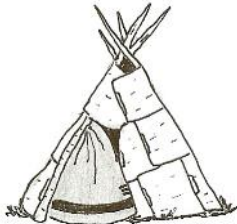









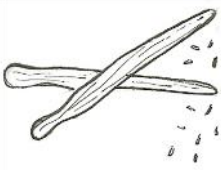


*For help or questions  
concerning accessibility  
at the park,  
please contact  
any park ranger, or  
Chief of Interpretation,  
Pam Neil.*

*218-475-0123 Voice/TDD*

*GRPO\_information@nps.gov*

# KIDS PAGE: FUR TRADE BINGO

Circle objects you see in the Heritage Center, Ojibwe Village, Voyageur's Encampment, Warehouse, Kitchen and Great Hall as you tour Grand Portage National Monument. Find five objects in a row vertically, horizontally or diagonally and you win!

B	I	N	G	O
				
				
				
				
				



**A FEW TIPS TO HELP YOU ENJOY YOUR VISIT**  
**Safety Officer Sharon Walker**



- Wear sturdy footwear when walking on Monument trails. Please stay on the trails. Watch closely for roots and uneven ground to avoid tripping.
  - Do not drink water from streams or lakes unless you first boil or treat it.
  - Never hike alone. Always tell a friend/relative where you are going, and when you plan to return.
  - When hiking in the backcountry during summer months, the use of insect repellent and/or a head net is strongly recommended.
- 

**REMINDERS AND HELPFUL INFORMATION**

- Notify a park employee if you encounter any situation you feel is unsafe.
  - All plants and animals within Monument boundaries are protected. Please help us protect them by not feeding or injuring animals or picking plants.
  - Pets and smoking are not permitted inside the stockade walls or inside buildings.
  - Please keep bicycles out of the stockade and secured to the bike rack provided at the Heritage Center. Do not lock bicycles to sign posts or trees.
  - A picnic area is located at the west end of the parking lot at the Mount Rose Loop trailhead stairs. Another is east of the palisade across Grand Portage Creek, and may be reached by walking the path between Grand Portage Bay and the palisade and crossing the footbridge.
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**VISITING ISLE ROYALE NATIONAL PARK**

For information about ferry service to Isle Royale National Park please ask  
park staff.

For more information about Grand Portage National Monument, contact:

**Superintendent, Grand Portage National Monument**

**P.O. Box 426, 170 Mile Creek Road, Grand Portage, Minnesota, 55605.**

**Voice/TDD: 218-475-0123**

Visit our website at: <http://www.nps.gov/grpo/index.htm>,

or contact us by e-mail at: [grpo\\_information@nps.gov](mailto:grpo_information@nps.gov)

*This document can be obtained in alternate formats.*

*Please contact the park's accessibility coordinator to make a request.*